3rd ON-SITE CONSTRUCTION MONITORING REPORT

ROSH PINAH SOLAR PARK

PHASE I

16 MARCH 2023

URBAN Green
SUSTAINABILITY CONSULTANTS

PROJECT INFORMATION

STUDY PHASE	CONSTRUCTION MONITORING
PROJECT TITLE	Rosh Pinah Solar Park Phase I
DEVELOPMENT LOCATION	Rosh Pinah (//Karas Region)
COMPETENT AUTHORITY	Ministry of Mines and Energy
APPROVING AUTHORITY	Ministry of Environment, Forestry and Tourism
PROPONENT	Rosh Pinah Solar Park (PTY) Ltd.
DEVELOPER	EMESCO Energy Namibia (PTY) Ltd.
APPOINTED CONTRACTOR	OTESA Civil Engineering (PTY) Ltd.
ENVIRONMENTAL ASSESSMENT PRACTITIONER	Urban Green cc P O Box 11929 Klein Windhoek Telephone: +264-61-300 820 Fax: +264-61-401 294 E-mail: urbangreen@iway.na Website: www.urbangreenafrica.net

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LIST OF ACRONYMS

BID	Background Information Document
˚C	degrees Celsius
DEA	Directorate of Environmental Affairs
DSR	Draft Scoping Report
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
i.e.	Example
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMA	Environmental Management Act
EMP	Environmental Management Plan
EPL	Exploration Licence
etc.	Etcetera
FSR	Final Scoping Report
Ha	Hectare
I&AP	Interested and Affected Parties
MAWLR	Ministry of Agriculture, Water and Land Reform
MET	Ministry of Environment and Tourism
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
No	Number
OHTL	Overhead Transmission Line
PV	Photovoltaic

RPSP	Rosh Pinah Solar Park (Pty) Ltd
RPZC	Rosh Pinah Zinc Corporation (Pty) Ltd
RPZM	Rosh Pinah Zinc Mine
ToR	Terms of Reference

GLOSSARY

The definitions given below are for explanatory purposes only.

Activity	The physical work that a Proponent proposes to construct, operate, modify, decommission, or abandon or an activity that a Proponent proposes to undertake.
Alien Species	It refers to a non-indigenous plant, animal or micro-organism; or an indigenous plant, animal or micro-organism, translocated or intended to be translocated to a place outside its natural range of nature, that does not normally interbreed with individuals of another kind, including any subspecies cultivar, variety, geographic race, strain, hybrid or geographically separate population.
Alternatives	A possible course of action, in place of another, that would meet the same purpose and need but which would avoid or minimize negative impacts or enhance project benefits. These can include alternative locations/sites, routes, layouts, processes, designs, schedules and/or inputs. The “no-go” alternative constitutes the ‘without project’ option and provides a benchmark against which to evaluate changes; development should result in net benefit to society and should avoid undesirable negative impacts.
Assessment	The process of identifying, predicting, and evaluating the significant effects of activities on the environment; and the risks and consequences of activities and their alternatives and options for mitigation with a view to minimise the effects of activities on the environment.
Audit	Regular inspection and verification of construction activities for implementation of the EMP.
Batch Plant	Machinery used on site for the mixing and production of concrete and associated equipment and materials.
Bulk Supply	The wholesale supply of i.e. water on a business-orientated basis, in large quantities, whether in treated or untreated form, for any utilisation purpose to a customer for own use or for subsequent supply by the customer to consumers.
Bund	An enclosure designed to hold at least 120% of the contents of a liquid storage vessel, tank, or drums to contain any spillage.
Competent Authority	A body or person empowered under the local authorities act or Environmental Management Act to enforce the rule of law.

Construction Activity:	A construction activity is any action taken by the Contractor, his subcontractors, suppliers, or personnel during the construction process.
Construction Camp	Refers to all storage stockpiles sites, site offices, container sites, other areas required to undertake construction and rest areas for construction staff or management.
Contaminated Water	Water contaminated by the Contractor's activities, e.g. concrete water, and runoff from plant/personnel wash areas.
Contractor	The principal person or company, including all subcontractors, undertaking the construction of the development as appointed by the Proponent.
Critically Endangered (IUCN)	A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Section V of the IUCN Red List Categories and Criteria[1]), and it is therefore considered to be facing an extremely high risk of extinction in the wild.
Cumulative Impacts	In relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
Emergency Situation	An incident, which potentially can significantly impact on the environment, and which, could cause irreparable damage to sensitive environmental features. Typical situations entail amongst others the: • Spill of petroleum products and lubricants into the aquatic system. • Potential damage, erosion and slumping of unstable river embankments or drainage channels. • Potential event of impeding the continuous flow of water to downstream water user's dependant on the flow; and Dangerous situation where livestock and children can be injured by any activity emanating from the construction or rehabilitation of the project implementation.
Endangered (IUCN)	A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V of the IUCN Red List Categories and Criteria[2]), and it is therefore considered to be facing a very high risk of extinction in the wild.
Environment	As defined in the Environmental Assessment Policy and Environmental Management Act - "land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment

[1] Available at http://s3.amazonaws.com/iucnredlist-newcms/staging/public/attachments/3097/redlist_cats_crit_en.pdf

[2] Available at http://s3.amazonaws.com/iucnredlist-newcms/staging/public/attachments/3097/redlist_cats_crit_en.pdf

	insofar as it represents archaeological, aesthetic, cultural, historic, economic, paleontological or social values".
Environmental Impact Assessment (EIA)	The process of examining the environmental effects of a development as prescribed by the Environmental Impact Assessment Regulations (GN. No. 30 of 2012) for activities listed as List of Activities which may not be undertaken without an Environmental Clearance Certificate from the Environmental Commissioner (GN. No. 29 of 2012).
Environmental Management Plan (EMP)	A working document on environmental and socioeconomic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project.
Environmental Site Manager (ESM)	It is a suitably qualified environmental officer appointed by the Contractor who oversees the on-site daily environmental responsibilities of the Contractor.
Evaluation	The process of ascertaining the relative importance/significance of information, in light of people's values, preference and judgements in order to make a decision.
Hazardous Substance	A substance that, in the reasonable opinion of the Engineer and/or ECO, can have a harmful effect on the environment.
Independent Environmental Officer (IEO)	A suitably qualified professional independent from the Proponent and Contractor who oversees the construction phase and ensure that all environmental specifications and EMP obligations are met during the phase. The IEO will be responsible for the monitoring, reviewing, and verifying of compliance with the EMP by the Contractor.
Interested and Affected Party (I&AP)	Any person, group of persons or organisation interested in, or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.
Listed Activity	An activity listed in terms of section 27(2) of the Environmental Management Act and the List of Activities which may not be undertaken without an Environmental Clearance Certificate from the Environmental Commissioner (GN. No. 29 of 2012).
Mitigate	The implementation of practical measures to reduce adverse impacts.
Monitoring	Regular inspection and verification of construction activities for degree of compliance to the EMP.
No-Go Areas	Areas identified as being environmentally sensitive in some manner and demarcated on plan, and on the Site with pegs or fencing and which are out of bounds to unauthorised persons. Authorisation must be obtained prior to entry.

Project Engineer	The person(s) who represents the Proponent and are responsible for the technical and contractual implementation of the works to be undertaken by the appointed contractors.
Proponent:	Any person who has submitted or intends to submit an application for an authorisation, as legislated by the Environmental Management Act no. 7 of 2007, to undertake an activity or activities identified as a listed activity or listed activities; or in any other notice published by the Minister or Ministry of Environment, Forestry & Tourism.
Public	Citizens who have diverse cultural, educational, political and socio-economic characteristics. The public is not a homogeneous and unified group of people with a set of agreed common interests and aims. There is no single public. There are a number of publics, some of whom may emerge at any time during the process depending on their particular concerns and the issues involved.
Resident Engineer (RE)	A person who represents the Project Engineer on Site and is responsible for the technical and contractual implementation of the works to be undertaken.
Scoping Process	Process of identifying: issues that will be relevant for consideration of the application; the potential environmental impacts of the proposed activity; and alternatives to the proposed activity that are feasible and reasonable.
Search and Rescue	The location and removal of specified plant species, without unnecessary damage, and their transfer to a specified location (on-site nursery).
Significant Effect/Impact	Means an impact that by its magnitude, duration, or probability of occurrence may have a notable effect on one or more aspects of the environment.
Solid Waste	All solid waste, including construction debris, chemical waste, excess cement/concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food, and domestic waste.
Species of Special Concern	Those species listed in the Endangered, Threatened, Rare, Indeterminate, or Monitoring categories of the South African Red Data Books, and/or species listed in Globally Near Threatened, Nationally Threatened or Nationally Near Threatened categories (Barnes, 1998).
Specification	A technical description of the standards of materials and workmanship that the Contractor is to use in the works to be executed, the performance of the works when completed and the way payment is to be made.
Topsoil	The top 150 mm of soil (topsoil) and root material of cleared vegetation.

Works	The construction operations and all related and incidental works, such as search and rescue, fencing and rehabilitation, in connection with the execution and carrying to completion of the project.

1 PROJECT INFORMATION

1.1 PROJECT OVERVIEW

The Project entails the construction and operation of a PV photovoltaic solar power plant to the extent of 80ha, which consists of the energy generation component (solar plant) and the transmission component (overhead power line), extending from the solar park to the intake sub-station.

1.1.1 SITE LOCALITY & OHTL ALIGNMENT

The Rosh Pinah Solar Park is located on a portion of the commercial farm Namuskluft No. 88, located approximately 2 km east of Rosh Pinah town, as indicated by Figure 1.1 (see Appendix A), while the transmission line will extend from the solar park to an intake substation of Rosh Pinah Zinc Mine (Figure 1.2).

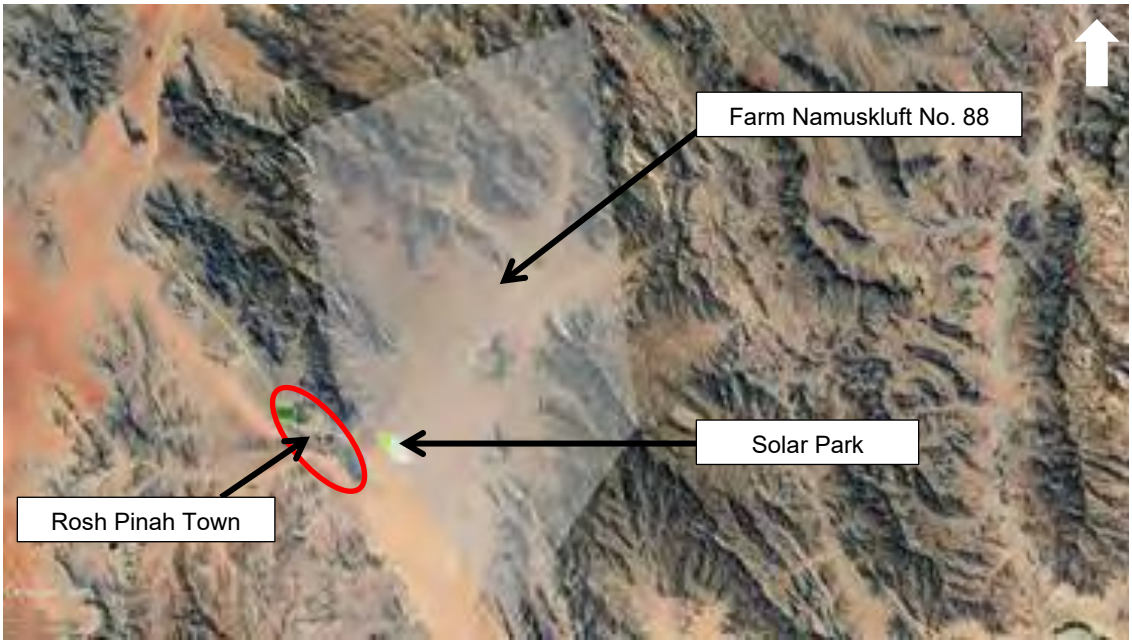


Figure 1.1 – Locality of Farm Namuskluft No, 88 and solar park with reference to Rosh Pinah

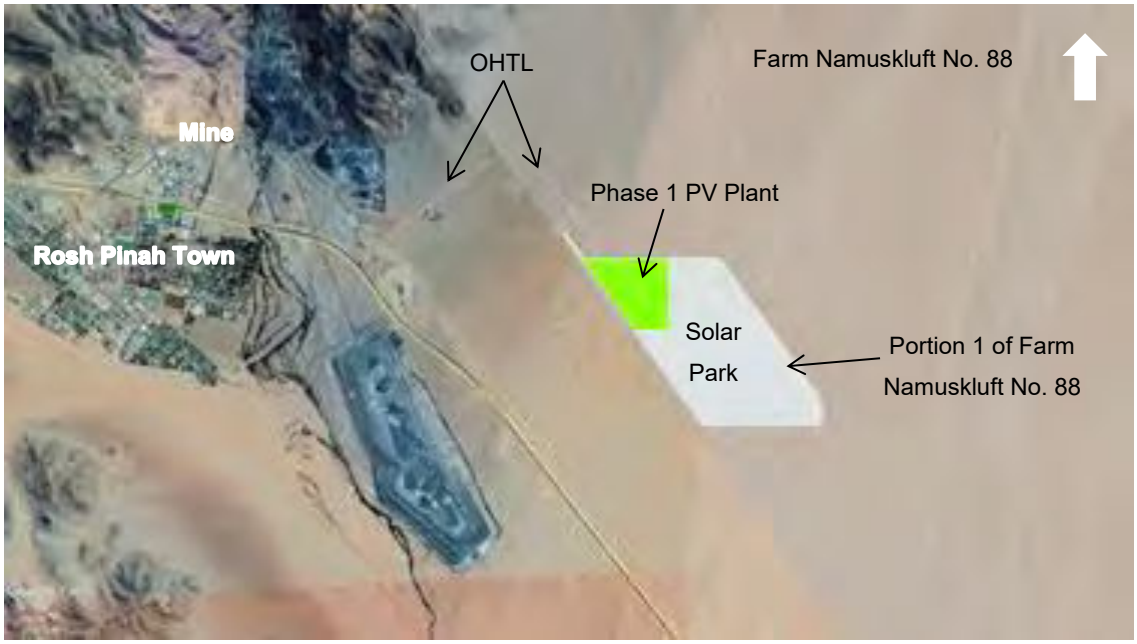


Figure 1.2 – Final locality of solar park & alignment of OHTL with reference to Rosh Pinah

1.1.2 SOLAR PARK DEVELOPMENT & SITE LAYOUT

The Solar Park will be constructed and developed in phases of 15 ha (Phase 1), 20 ha (Phase 2) and eventually 45 ha (Phase 3), as indicated by Figure 1.3 below.

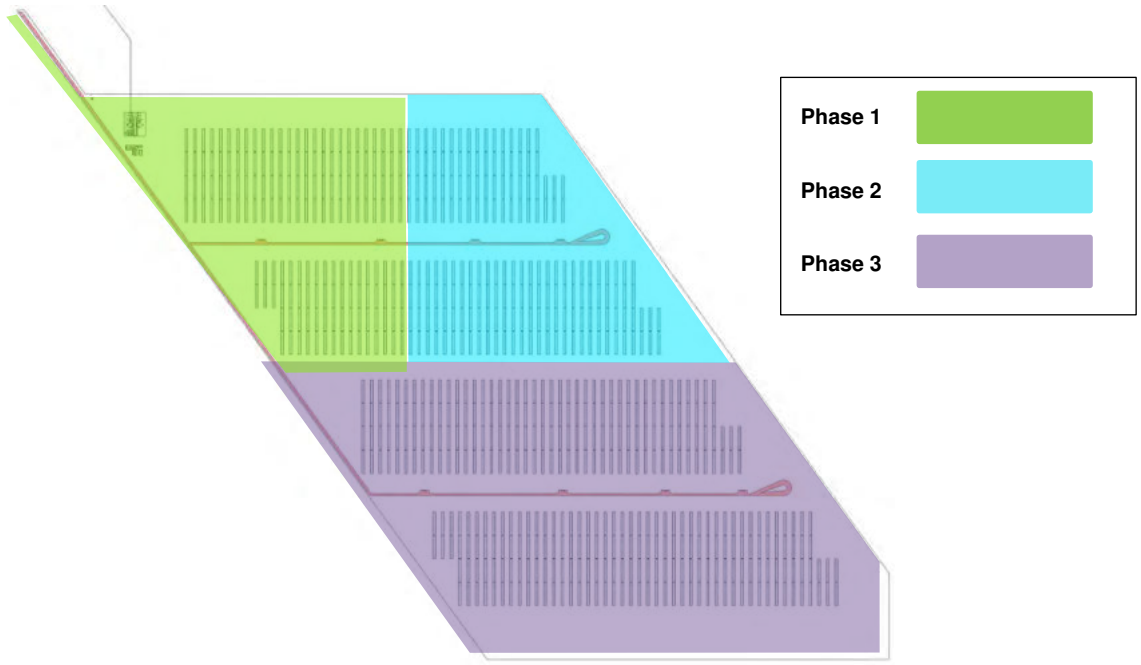


Figure 1.3 – Phased development & site layout of solar park

The solar park consists of a variety of infrastructure, each having a particular purpose from harvesting the sun's energy (i.e. PV panel), ensuring optimal exposure of the PV panels during daylight (i.e. tracking system), stepping-up the voltage (i.e. field transformers), transmitting electricity to the site substation from where the electricity is fed via an overhead transmission line to the intake substation of the Rosh Pinah Zinc mine (see section 4.3.3 of the Environmental Scoping Report, June 2021).

The activities associated with the construction phase are presented in section 4.3.7 of the Environmental Scoping Report, June 2021, which in brief entails –

- Site surveillance and demarcation;
- Site clearance & establishment;
- Construction;
- Site rehabilitation;
- Commissioning operations; and
- Decommissioning.

In addition to the above, the Environmental Scoping Assessment concluded that a search and rescue operation precedes the construction activities, to be done by a qualified and experienced ecologist, which was done by the Lithops Research & Conservation Foundation (see Appendix D).

1.2 THE RECEIVING ENVIRONMENT

1.2.1 THE PHYSICAL ENVIRONMENT

The physical environment is typical of the *Succulent Karoo* biome found within the southern parts of Namibia, which directly determines this particular bio-physical environment (see section 5.2 of the Environmental Scoping Report, June 2021).

The area falls within the Gamchab Basin, which is dominated by large open valleys of gently sloping ground covered with a spares layer of grass. The relief of Farm Namuskluft No. 88 is characterised by relatively steep mountainous terrain with gradients of more than 45%, surrounding a relatively flat plain with a gentle slope of 3%. The 80-ha project site is located on this flat plain, closest to Rosh Pinah (see Figure 5.2 of the Environmental Scoping Report, June 2021).

The Farm and surroundings are located within the Orange River catchment area (*NamWater, 2021*). The proposed Project site is located on the edge of a very wide and sparsely vegetated ephemeral drainage line with its main channel located to the south of the proposed Project site.

The larger area surrounding Rosh Pinah and the Project site does not contain any surface water bodies, with the Orange River to be the closest surface water body, located 17km to the south. Ground water potential in the area is rated as 'very low and limited potential', resulting in very poorly developed underground water resources (Hydrological Map of Namibia).

The rugged Gomkab basin lies immediately to the east and the active dunefields of the southern Namib Desert to the west. There is no surface water in the immediate vicinity of the Project site, which conditions severely limited both historical and pre-colonial human settlement, as highlighted in the Archaeological Assessment (Appendix E of the Environmental Scoping Report, June 2021).

1.2.2 THE BIOPHYSICAL ENVIRONMENT

The general area is commonly referred to as the *Desert and Succulent Steppe* or also documented as the *Succulent Karoo*. This great diversity of plants makes it the most important botanical area in Namibia. A detailed description is presented in section 5.3 of the Environmental Scoping Report, June 2021).

The *Succulent Karoo* has been identified as one of 25 biodiversity hotspots in the world and of extreme high conservation value. Farm Namuskluft No. 88 is well known to be one of the most biodiverse farms in Namibia, and it harbours numerous endemic and protected plants species (*Mannheimer, 2021*). The Farm is significant in terms of Namibia's biodiversity assets and could be a target for future formal protection once the regulations on biodiversity offsets are completed.

The Namib (of which the *Desert and Succulent Steppe* forms part of) is relatively well represented in the protected area network in Namibia covering 32% of the land area and 29.7% of the biome. Most of this biome currently falls within the Tsau //Khaeb (Sperrgebiet) National Park, while the *Dwarf Shrub Savannah* is also protected, but to a lesser degree, by the /Ai-/Ais-Richtersveld Transfrontier Park and the Naute Game Park.

The most important fauna species expected to occur in the general Rosh Pinah (Solar PV Project) area are the species classified as endangered (Ludwig's bustard, white-backed vulture, black harrier, tawny eagle, booted eagle, martial eagle, black stork), vulnerable (lappet-faced vulture, African fish-eagle, Secretarybird) and near threatened (Cape eagle owl, kori bustard, Verreaux's eagle, peregrine falcon, marabou stork) from Namibia as well as those classified by the IUCN (2021) as critically endangered (white-backed vulture), endangered (Ludwig's bustard, lappet-faced vulture, black harrier, martial eagle, Secretarybird), vulnerable (tawny eagle) and near threatened (kori bustard).

Some unique vegetation and habitat do exist in the general area e.g., rocky outcrops, inselbergs, Orange River, etc., but the project site is not located in any of these mentioned areas. The proposed Solar PV plant and 66kV transmission line route passes through freehold farmland and part of the Rosh Pinah Townlands with much anthropomorphic influences (e.g. tar road, gravel roads, tracks, transmission lines, mining activities, quarries, farm buildings and infrastructure, etc.) and not viewed as a pristine area.

With respect to Farm Namuskluft No. 88's status to be one of the most biodiverse farms in Namibia and its significance to be potentially targeted for future formal protection, an on-site search and rescue operation was done by Lithops Research & Conservation Foundation during 5 to 12 November 2021. The search and rescue report by Lithops Research & Conservation Foundation is attached as Appendix D. An on-site facility was created where the rescued plants are kept until such time that replanting will be done as part of the rehabilitation phase (see Appendix B – Photo Report).

1.2.3 LAND USE AND INFRASTRUCTURE

The immediate area surrounding the town of Rosh Pinah shows a larger variety of land uses, which includes agriculture, mining, protected areas, urban and supporting infrastructure (see section 5.4 of the Environmental Scoping Report, June 2021.

The Project site (Portion 1 of the Farm Namuskluft No. 88) for the solar farm is located on Farm Namuskluft No. 88, which is zoned for agricultural use. Other activities on Farm Namuskluft No. 88, all located along the western boundary of the farm alongside Rosh Pinah Townlands, are sand mining, farmhouse, and other buildings. The buildings located at the entrance to the Farm, which were used by the old Riding Club, are currently leased to a local church organisation, which is in the process of renovating the buildings.

Given the existence of Rosh Pinah for about 50 years and nature of the primary economic activity, i.e., zinc mining, the predominant activities are mining related, with other supporting activities, i.e., urban centre, and infrastructure.

This part of the Country host large areas set-aside as protected areas, either for conservation and ecotourism purpose or diamond mining security. To the east and south-east of Rosh Pinah town and the Project site lies the /Ai-/Ais-Richtersveld Transfrontier Park. To the west lies the Tsau //Khaeb (Sperrgebiet) National Park, this used to be known as Diamond Area No 1.

The town of Rosh Pinah and Townlands (i.e., Farm Rosh Pinah Town and Townlands No. 157) was formally created during 2016 for purpose to accommodate the urban activities on a separate

portion of land. Rosh Pinah Zinc Corporation (PTY) Ltd. and Skorpion Zinc established RoshSkor (PTY) Ltd. to manage the town's municipal-related services and affairs, as Rosh Pinah Town and Townlands does not fall under any regional government management.

A variety of directly relevant and supporting infrastructure to the Mines, the town of Rosh Pinah and surrounding activities exists.

2 THE ENVIRONMENTAL MANAGEMENT PLAN

2.1 PURPOSE OF THE ENVIRONMENTAL MANAGEMENT PLAN

The purpose of the Environmental Management Plant (EMP) is to provide specifications for "good environmental practice" in a sensitive environment for application during construction and operation.

For this purpose, an EMP (June 2021) was drafted as part of the EIA study of which a copy has been provided to the appointed Contractor, which is available at all times at the Contractor's Site Office.

As such, the EMP provides specifications that the Proponent and his nominated Contractor/s must adhere too to minimise adverse environmental impacts associated with the construction activities. The Proponent to which authorisation was granted, is ultimately responsible for overall environmental performance.

2.2 SCOPE OF THE EMP

In order to ensure a holistic approach to the management (i.e. avoidance or mitigation) of environmental impacts during the construction works, the EMP sets out the methods by which proper environmental controls are to be implemented by the Contractor and all other parties involved, and monitored by the appointed Contractor's Environmental Officer daily on-site. The Contractor is responsible to compile and submit Monthly On-site Environmental Monitoring Reports to the Independent Environmental Officer (IEO), who is responsible for the review thereof and submission with the Ministry of Environment, Forestry and Tourism (Department of Environmental Affairs). In addition to the mentioned, the IEO is also responsible to undertake an independent on-site environmental monitoring inspection, discuss the findings and corrections with the Contractor and submit the reports with the Ministry of Environment, Forestry and Tourism (Department of Environmental Affairs).

The provisions of the EMP (June 2021) are binding on the Proponent until the end of project life. Any third party appointed by the Proponent in terms of the design, construction and operation of the project must comply with the conditions of this EMP.

3 CONSTRUCTION MONITORING COMPLIANCE

3.1 MONITORING METHODOLOGY

The on-site monitoring done by the IEO was done as per the requirements and stipulations of the EMP (June 2021). This entailed an evaluation of the on-site activities as on the day against the requirements presented in Sections 3 & 4 of the Project EMP (June 2021).

3.2 MONITORING REPORTING

The findings are presented in the checklists below Tables 3.1 & 3.2, which includes comments to which the Proponent or Contractor must comply with, if any.

A photo report is attached (Appendix B) presenting the status on the day of undertaking the on-site assessment. Other supporting documents are also attached.

This Report (3rd On-site Construction Monitoring Report, 16 March 2023) presents the findings of the final on-site monitoring done for Phase I, which has now been completed.

The Contractor's Site Office will remain for the time until all three phases have been completed, where after the Contractor will decommission.

The Phase I site has been rehabilitated and prepared for replanting of the rescued plants and natural revegetation to take place over the following seasonal cycles. The replanting of rescued plants, their success and natural revegetation progress will be monitored over the following years.

3.3 CONCLUSION

The Contractor's Office Site, the construction site and construction activities from site establishment to construction completion has been managed well within the requirements of the EMP. The Project has been executed in accordance with best practice principles at all times and compliance with Namibia legal requirements and environmental standards.

Table 3.1 – General Compliance

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
PLANNING & DESIGN				
Contractor Requirements	Ensure that the Contractor is aware of his/her responsibility.	Provide the contractor with the EMP.	Proponent Project Engineer	**Yes. File with EMP and Scoping Assessment Report (June 2021) & ECC (September 2021) available at Contractor's Office**
Independent Environmental Officer (IEO)	Ensure that activities on site are compliant with the requirements of the EMP.	Appoint an Independent Environmental Officer to oversee environmental aspects of the development.	Proponent Project Engineer	**Urban Green cc was appointed by EMESCO Energy Namibia (PTY) Ltd.**
Waste Management	Ensure the effective and efficient separation, storage and removal of waste from the site.	Develop a Waste Management Plan for the construction phase which will detail: - Schedules for collection; - Responsible parties for collection; - Details regarding waste separation (hazardous vs. general); - Provision of facilities for the separation and storage of waste; - Details regarding the disposal of the waste (hazardous and general); Assigns responsibilities for these activities.	Contractor	**Method Statements received from Rosh Pinah Solar Park. Attached as Appendix C. On-site activities undertaken in accordance with Plan.**
Loss of biodiversity and habitat destruction	Be aware of the highly sensitive nature of the flora species and that each plant is of value. Due to the unique flora biodiversity, be aware of unique habitat for fauna species.	A Botanist should be involved in the planning and design of the project to identify protected species that must be removed or transplanted. This will ensure hands on prevention of important	Proponent	**The Lithops Research & Conservation Foundation was appointed by EMESCO Energy Namibia (PTY) Ltd., to undertake a search & rescue.**

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
		biodiversity loss and assistance with avoidance or transplantation of relevant species.		**This was done during November 2021 and a facility was established where these plants are accommodated for replanting during the Project's rehabilitation phase. Documents attached as Appendix D.** **Find and rescue is done by the Contractor as the activities progress. Rescued plants are replanted at the on-site nursery.**
Loss of biodiversity and habitat destruction	Be aware of bird mortalities associated with powerlines.	Horizontal configured designs experience more problems with bird streamers than vertically configured designs.	Contractor	**No bird mortalities were detected during the on-site monitoring inspection.**
Loss of biodiversity and habitat destruction	Be aware of bird mortalities associated with powerlines.	Make provision for anti-collision mechanisms.	Contractor	**The status will be monitored to determine if any bird mortalities take place along the length of the OHTL and if so, appropriate mitigations will be applied.**
Loss of biodiversity and habitat destruction	Be aware of bird mortalities associated with powerlines.	Make provision for adequate gaps between wires on power lines	Contractor	**No bird mortalities were detected during the on-site monitoring inspection. Sufficient gaps exist. The status will be monitored to determine if any bird mortalities take place along the length of**

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
				the OHTL and if so, appropriate mitigations will be applied.
Loss of biodiversity and habitat destruction	Be aware of electrocution of animals.	Plan for electrostatic animal guards on the bushings.	Contractor	**No bird mortalities were detected during the on-site monitoring inspection. The status will be monitored to determine if any bird mortalities take place and if so, appropriate mitigations will be applied.**
Loss of biodiversity and habitat destruction	Be aware of electrocution of animals.	Pole mounted transformers and bushings should be insulated.	Contractor	**No bird mortalities were detected during the on-site monitoring inspection. The status will be monitored to determine if any bird mortalities take place and if so, appropriate mitigations will be applied.**
Loss of biodiversity and habitat destruction	Be aware of electrocution of animals.	Substations must be equipped with electric fencing to prevent baboons entering such areas.	Contractor	**Substation to which the Project will feed into (Rosh Pinah Zinc Mine) is fenced.**
Loss of biodiversity and habitat destruction	Be aware of bird mortalities associated with solar parks	Solar Panels must be visible to birds as structures.	Contractor	**No bird mortalities were detected during the on-site monitoring inspection. The status will be monitored to determine if any bird mortalities take place and if so,**

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
				appropriate mitigations will be applied.
Loss of biodiversity and habitat destruction	Be aware of interference of security fence with small animal movement	Do not electrify strands around the solar plant lower than 20 cm from the ground.	Contractor	**The fence has not been electrified. No evidence of any dead animals, reptiles, etc. was found on-site.**
SITE ESTABLISHMENT				
Construction activities	Be aware of the highly sensitive nature of the flora species and that each plant is of value. Due to the unique flora biodiversity, be aware of unique habitat for fauna species.	A layout plan for construction activities needs to be developed and approved by the Botanist and Environmental Site Manager.	Contractor	**Layout plan received. Attached as Appendix E. Site layout still the same as per the layout plan. No changes.**
Construction activities	Be aware of the highly sensitive nature of the flora species and that each plant is of value. Due to the unique flora biodiversity, be aware of unique habitat for fauna species.	Ensure that there is no unnecessary disturbance to areas on the site and that construction activities take environmental considerations into account.	Contractor	**No unnecessary disturbances other than that was planned and required for site establishment and fencing of the site was detected. Signs for no-go areas are in place and visible. Continues education and reminder talks are done.**
Construction Area	Ensure that the Construction Area does not pollute the environment and is not located on a sensitive site.	Portable, chemical toilets and potable water must be provided for the construction personnel.	Contractor	**Portable toilets available at the construction site.**
Soil	Ensure preservation of the topsoil.	Topsoil stockpiles must be established in disturbed zones.	Contractor	**Topsoil stockpiles that previously existed has been removed Topsoil have scattered on-site in-between**

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
				infrastructure and structures as part of the post-construction rehabilitation.
Soil	Ensure that erosion impacts are kept under control.	Areas scheduled for construction should be cleared only 1 week prior to construction.	Contractor	**Clearance is done within the areas where infrastructure is intended. Remaining areas left undisturbed.**
Educational Talks	Improve the awareness of all construction personnel regarding environmental matters.	Develop and implement a training programme to address environmental issues and responsibilities.	Contractor	**Contractor undertook weekly toolbox talks on all topics relevant to the week's activities. Toolbox talks is attached as Appendix F.**
CONSTRUCTION				
Independent Environmental Officer	Ensure that there is compliance with the EMP on site.	An Independent Environmental Officer may inspect the site at any time during the construction phase.	IEO	**3rd On-site Inspection done on 16 March 2023 and findings presented to Contractor & Developer**
Effect of the EMP	Ensure that the EMP is enforced on all contractors.	Each contractor and subcontractor must be notified and bound by the content of this EMP.	Contractor(s)	**Done**
Archaeological Evidence	Ensure the protection of archaeological sites.	Construction must be stopped, and a professional archaeologist consulted should any archaeological remains be uncovered.	Contractor Archaeologist IEO	**Contractor has been informed accordingly. No archaeological finds to date.**
Borrow Pits	Ensure that the soil resources are not over exploited.	No borrow pit may be excavated from any sensitive or open space areas.	Contractor	**No new borrow pit forms part of this project.**

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
Cleaning of equipment	Ensure that spillages are minimised and that where these occur, that they are appropriately managed.	Proper cleaning trays should be used for the cleaning of cement mixing and handling equipment.	Contractor	**No evidence of any spillages found on-site.**
Communication	Ensure that interested and affected parties are provided with a medium through which to lay complaints regarding activities on site.	A complaints register should be kept in the site office. The IEO needs to be informed of all complaints and corrective action must be taken where required.	Contractor	**No complaints received to date as per the Contractor's notice.**
Contaminated Soil	Ensure that soils that are contaminated do not pollute the environment.	All soils that have been contaminated by fuel spills, paints spills, etc. must be appropriately removed from the site.	Contractor	**No evidence of any spillages found on-site.**
Dust	Ensure dust does not cause nuisance to neighbouring activities.	Wet all exposed sand areas such as roadways, stockpiles and working areas that give rise to dust. This must ensure adequate dust suppression.	Contractor	**Done by watering of areas once a day.**
Ground Water	Prevent the contamination of groundwater resources.	Vehicles must be equipped with drip trays to prevent spillages of oils and fuels.	Contractor	**Stationary vehicles were equipped with drip trays.**
Loss of biodiversity and habitat destruction	Be aware of the highly sensitive nature of the flora species and that each plant is of value. Due to the unique flora biodiversity, be aware of unique habitat for fauna species.	Protected, medicinal and/or sensitive plants that are likely to be destroyed or affected by construction activities should be relocated to more suitable areas.	Proponent Contractor	**The Lithops Research & Conservation Foundation was appointed by EMESCO Energy Namibia (PTY) Ltd., to undertake a search & rescue. This was done during November 2021 and a facility was established where these plants are accommodated for replanting during the Project's rehabilitation phase.**

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
				Find and rescue is done by the Contractor as the activities progress. Rescued plants are replanted at the on-site nursery.
Loss of biodiversity and habitat destruction	Be aware of the highly sensitive nature of the flora species and that each plant is of value. Due to the unique flora biodiversity, be aware of unique habitat for fauna species.	Ensure that there is no unnecessary disturbance to areas on the site and that construction activities take environmental considerations into account.	Contractor	**Signs in place to indicate no-go areas. Ensure that continues education and reminder talks are done.**
Installation of Services	Ensure that water used to wash machinery and any other "grey" water does not pollute the site.	Provide a wash bay with an impermeable floor to contain such water.	Contractor	**Done**
General waste	Ensure that the site remains clean and clear of litter.	All litter must be collected into rubbish bins located on the site. These bins must be regularly (i.e. weekly) collected and transported to a registered waste disposal facility.	Contractor	**Done**
Noise	Ensure that nuisance noise from construction activities does not disrupt the surrounding landowners.	Limit construction time to the following hours: 07:00 to 18:00 during week. 08:00 to 15:00 on Saturdays and no noisy activities on Sundays.	Contractor	**Done**
Noise	Ensure that nuisance noise from construction vehicles does not disrupt the surrounding landowners.	No heavy vehicles may be permitted to move on site on Sundays.	Contractor	**Done**

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
Road Works and Traffic	Ensure that residents are not inconvenienced by the movement of construction vehicles off-site.	Notices should be placed on the access road during the construction period indicating that heavy vehicles are using the road.	Contractor	**Formal access from the C13 is used and signs in place.**
Safety & Security	Ensure the safety and security of staff and the public.	All local authority by-laws must be adhered to.	Contractor	**Done**
Safety & Security	Ensure the safety and security of staff and the public.	All contractors must take cognisance of and abide by the Occupational Health and Safety Act.	Contractor	**Done. First aid kit is available at the site office.** **No incidents reported since previous visit.**
Safety & Security	Ensure the safety and security of staff and the public.	Provided fencing needs to be checked and maintained.	Contractor	**All fences are good and in place.**
Storage Facilities	Ensure that hazardous materials are stored according to legislative requirements.	Specifically, designed storage facilities need to be provided and used for hazardous materials.	Contractor	**Cement stored in enclosed store with concrete floor.**
Storage Facilities	Ensure that fuel stored on site does not pose a pollution and fire hazard.	No fuel to be stored on site, but if necessary, it shall be bunded to 110% of the capacity of the largest container.	Contractor	**No fuel is stored on-site.**
Storm Water Run-off	Ensure that run-off does not contribute to erosion & siltation.	Construct and maintain berms on the site to contain storm water run-off or establish riffle beds or retention ponds, as appropriate.	Contractor	**None required at this point in time.**
Vehicle repairs	Ensure that spillages are minimised and that where these occur, that they are appropriately managed.	No vehicle repairs on site, but if necessary, an appropriate work surface may only take	Contractor	**No repairs are done on-site, but within town.**

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
		place within the provided area in the Construction Area		
Waste	Ensure the adequate removal of solid waste.	All wastes (hazardous or general) must be collected and disposed of at an appropriate registered facility.	Contractor	**Done. At Rosh Pinah dump site.**
Waste	Ensure the adequate management of waste	Refuse shall be disposed of into scavenger- (baboons, dogs, rodents, etc.) and weather-proof bins. The Contractor shall then remove the refuse collected from the working areas, from Site at least once a week or depending on necessity. Refuse must be disposed of at Rosh Pinah landfill.	Contractor	**Done**
Waste	Ensure the adequate management of waste.	No waste should be burnt on site.	Contractor	**No burning of waste detected.**
POST CONSTRUCTION				
Site Rehabilitation	Ensure the site is left clean, orderly and free of rubble after construction activities.	Remove all rubble, rubbish, litter, unused building equipment, contaminated soils or any other relevant articles from the site following the end of the construction phase.	Contractor	**Site is clean of any construction waste and/or contaminated soil.**
Soil	Promote the rehabilitation of the site back to its original condition as far as possible.	Soil that has been compacted during construction activities must be ripped in two perpendicular directions.	Contractor	**Compacted areas have been ripped and prepared for natural revegetation.**

Issue	Objective	Mitigation Measure	Responsibility	Compliance Notes
Soil	Ensure the re-use of topsoil for rehabilitation.	Topsoil that is stockpiled on site must be used to rehabilitate the disturbed areas.	Contractor	**Top soil has been redistributed over the extend of the disturbed areas.**
Vegetation	Promote replanting of endemic species associated with the area.	Plant species that had to be removed/damaged during construction should be replanted.	Botanist	**The replanting of the rescued plants will commence during the upcoming rainy season and done with the guidance of the ecologist.**
MONITORING				
Audit Reports	Ensure adequate reporting of progress with the development	Regular reports, monthly and construction end are proposed, and should be forwarded to the DEA.	IEO	**On-site Environmental Officer is responsible for Bi-weekly checklist reporting.**
Monitoring	Ensure compliance with the requirements of the EMP.	Undertake monitoring activities monthly.	IEO	**On-site Environmental Officer is responsible for Bi-weekly checklist reporting. IEO to undertake monitoring visit every three months.**

Table 3.2 – Detailed Monitoring Checklist

Report No: 3rd On-site Monitoring Report (IEO) **Date: 16 March 2023**

Method Statements	**Contractor:**	**Date received:**
Method statements received. Attached as Appendix C.	OTESA Civil Engineering (PTY) Ltd.	11 April 2022

Environmental Education	**Contractor:**	**Date undertaken:**
Toolbox talks are done. Attached as Appendix F.	OTESA Civil Engineering (PTY) Ltd.	See Appendix F.

	Observation	**Remedial Action**	**Compliance**
1. Construction			
1.1 All plant, personnel, etc. restricted to works area?	No activity observed outside of the currently demarcated construction area.	-	**Yes**
1.2 Contractor's Camp / Site Office located in area of low environmental sensitivity as indicated by the Engineer?	Yes, within previous farm stall fenced area. Footprint remained the same as per the previous disturbed area.	-	**Yes**
1.3 Where needed, sensitive areas adequately fenced off?	No-go signs are in place.	-	**Yes**
1.4 Fencing well maintained?	Yes. Fence at Contractor's Camp / Site Office and PV site in good condition and well maintained.	-	**Yes**
1.5 No unauthorised entry, stockpiling, etc. outside work areas?	None detected.	-	**Yes**
1.6 All vehicles and plant remain on designated routes?	No off-road driving detected. Old tracks from pre-construction time visible in area.	-	**Yes**

	Observation	Remedial Action	Compliance
1.7 Information posters put up and maintained where needed?	Done as per the requirements.	-	**Yes**
1.8 No smoking in hazardous areas?	No smoking allowed on-site apart from dedicated smoking area at Contractor's Camp / Site Office	-	**Yes**
1.9 Basic firefighting equipment available on Site?	At office at Contractor's Camp / Site Office	-	**Yes**
1.10 No burning of wastes as a means of disposal?	None detected on-site	-	**Yes**
1.11 Staff aware of procedures in the event of spills/leaks?	Response team is trained and aware of procedures.	-	**Yes**
1.12 Materials for dealing with spills/leaks available?	On-site available at site office	-	**Yes**
1.13 Emergency contact numbers displayed at Contractor's office / Site Office?	At entrance to Contractor's Camp / Site Office	-	**Yes**
1.14 Complaints Register up to date?	No complaints submitted to date.	-	**Yes**
1.15 Archaeological material found on Site?	None found to date	-	**Yes**
1.16 No animals trapped or harmed?	None detected on-site	-	**Yes**

	Observation	Remedial Action	Compliance
1.17 No flora removed or damaged outside work areas?	None detected on-site	-	**Yes**
1.18 Adequate drainage and retaining works in place to control erosion/siltation?	Contractor's camp / Site Office is not subject to any erosion. Drainage channels on the PV site are kept as is to ensure natural through flow.	-	**Yes**
1.20 No concrete mixing on bare ground?	None detected during the site visit. With the construction phase completed, no concrete mixing is taking place.	-	**Yes**
1.21 Concrete batching restricted to area of low environmental sensitivity?	With the construction phase completed, no concrete mixing is taking place. None detected during the site visit.	-	**Yes**
1.22 All wastewater from concrete mixing area disposed of via wastewater management system?	With the construction phase completed, no concrete mixing is taking place. None detected during the site visit.	-	**Yes**
1.23 Concrete mixing area kept neat and clean?	With the construction phase completed, no concrete mixing is taking place. None detected during the site visit.	-	**Yes**
1.24 Suitable screening and containment of cement silos?	Cement is stored within enclosed storeroom at Contractor's office site.	-	**Yes**
1.25 All visible remains of excess concrete removed on completion of concrete work?	With the construction phase completed, no concrete mixing is taking place. None detected during the site visit.	-	**Yes**

	Observation	Remedial Action	Compliance
1.26 No pollution from drilling operations?	With the construction phase completed, no hammering is taking place. No pollution detected on-site.	-	**Yes**
1.27 Location and rescue of plants undertaken by suitably qualified person?	Yes. The Lithops Research & Conservation Foundation was appointed by EMESCO Energy Namibia (PTY) Ltd., to undertake a search & rescue. This was done during November 2021 and a facility was established where these plants are accommodated for replanting during the Project's rehabilitation phase. More plants are being relocated by the contractor as the project progresses.	-	**Yes**
1.28 Rescued plants moved to nursery if direct transplantation not possible?	Yes. The Lithops Research & Conservation Foundation was appointed by EMESCO Energy Namibia (PTY) Ltd., to undertake a search & rescue. This was done during November 2021 and a facility was established where these plants are accommodated for replanting during the Project's rehabilitation phase. More plants are being relocated by the contractor as the project progresses.	-	**Yes**
1.29 After vegetation clearance, all unstable areas are properly stabilised?	Vegetation clearance is limited to Contractor's Site / Site Office, access road to and within PV site and small trenches for cabling. No unstable areas exist to the extent of posing a safety risk.	-	**Yes**

	Observation	Remedial Action	Compliance
1.30 Cleared vegetation properly disposed of?	Very little vegetation has been cleared given the sparse vegetation on-site. Cleared vegetation was left on PV site as it holds no potential fire risk.	-	**Yes**
1.31 All wastes removed from cleared area and disposed of?	All waste associated with the Contractor's activities has been removed from site. Some waste from previous farming activity was found in and around the Contractor's Camp/ Site Office and PV site. Contractor is cleaning the larger site as the activities progresses.	-	**Yes**
1.32 Mulched vegetation stored in bags?	Very little vegetation has been cleared given the sparse vegetation on-site. No mulched required for stabilisation as no steep excavated areas exists.	-	**Yes**
1.33 Fertilisers containing phosphates not used?	None used.	-	**Yes**
1.34 No planting undertaken where construction works have not yet been finished?	No.	-	**Yes**
1.35 No unauthorised traffic on revegetated areas?	No revegetation has been undertaken yet. Site has been rehabilitated and prepared for revegetation.	-	**Yes**
2. Materials			
2.1 Construction materials adequately secured to ensure safe deliveries?	All remaining construction material placed within boundaries of Contractor's Camp / Site Office and out of way.	-	**Yes**

	Observation	Remedial Action	Compliance
2.2 All materials being stored inside Contractor's Camp / Site Office?	All safely stored and out of way.	-	**Yes**
2.3 All imported materials free of weeds, litter, etc.?	With the construction phase completed no further import of materials are taking place.	-	**Yes**
2.4 Stockpile areas approved?	With the construction phase completed no further stockpiling is taking place. All stockpiles have been rehabilitated.	-	**Yes**
2.5 Topsoil stripped and stockpiled at a suitable site prior to earthworks?	With the construction phase completed no further topsoil stripping and stockpiling is taking place. All stockpiles have been rehabilitated.	-	**Yes**
2.6 No spoil stockpiled outside agreed areas?	With the construction phase completed no further topsoil stripping and stockpiling is taking place. All stockpiles have been rehabilitated.	-	**Yes**
2.7 Spoil stockpiles correctly shaped and protected?	With the construction phase completed no further topsoil stripping and stockpiling is taking place. All stockpiles have been rehabilitated.	-	**Yes**
2.8 All plants used for landscaping/rehabilitation listed in the approved plant list?	Only the plants that has been rescued will be replanted. No other plants will be introduced.	-	**Yes**
2.9 Plants adequately protected during transit and at storage facilities?	Correctly done.	-	**Yes**

	Observation	Remedial Action	Compliance
2.10 Plants healthy and free from diseases and pests?	All plants at nursery are healthy and in good condition.	-	**Yes**
3. Construction Plant			
3.1 Fuel/oil storage facilities adequately secured and protected against leakage?	No fuel/oil storage facility currently on-site	-	**Yes**
3.2 Safety signage provided at fuel storage areas?	No fuel/oil storage facility currently on-site	-	**Yes**
3.3 All electrical/petrol pumps suitably equipped and placed not cause any danger of ignition?	No fuel/oil storage facility currently on-site	-	**Yes**
3.4 Fuel storage areas comply with fire safety regulations?	No fuel/oil storage facility currently on-site	-	**Yes**
3.5 Necessary authorisations obtained for temporary above ground fuel tanks?	No fuel/oil storage facility currently on-site	-	**Yes**
3.6 Capacity of a fuel tank does not exceed 9000 ℓ?	No fuel/oil storage facility currently on-site	-	**Yes**
3.7 Fuel tanks erected at least 3.5 m away from buildings, boundaries, or other flammable materials?	No fuel/oil storage facility currently on-site	-	**Yes**
3.8 Adequate toilet facilities provided for staff (min. 1 toilet per 30 workers)?	Toilets for men and women are provided at the Contractor's Camp. Mobile toilets are	-	**Yes**

	Observation	Remedial Action	Compliance
	available at the construction site and safely secured. Toilets are clean and well maintained.		
3.9 Toilets adequately maintained?	Clean and kept need and clean.	-	**Yes**
3.10 All workers use toilets?	No evidence detected that workers are using the environment.	-	**Yes**
3.11 Scavenger-proof bins with lids provided at eating areas?	Bins provided in-house at kitchen area.	-	**Yes**
3.12 Waste temporarily stored inside Contractor's Camp / Site Office in weather- and scavenger-proof bins?	Yes.	-	**Yes**
3.13 No burying or dumping of wastes on site?	None detected at the Contractor's Camp / Site Office or on-site construction area.	-	**Yes**
3.14 Waste management system in place?	Three bin system in place.	-	**Yes**
3.15 Refuse disposed of at licensed landfill?	At Rosh Pinah town dump site.	-	**Yes**
3.16 Adequate waste-water management system in place?	Underground septic tank well maintained.	-	**Yes**

	Observation	Remedial Action	Compliance
3.17 Approval for discharge of contaminated water into municipal sewer system?	Approval obtained from Rosh Pinah Town Management Company (RoshSkor)	-	**Yes**
3.18 Runoff from workshops, fuel depots, etc. directed into conservancy tanks for disposal at approved site?	No workshops or fuel depot currently at contractor's camp.	-	**Yes**
3.19 Wash areas placed and built in such a way that does not cause any pollution?	Wash bay is within bunded area and wastewaters are left to evaporate, which is effective given the dry and hot daily temperatures. Dried waste is collected and dumped at the Rosh Pinah dump site.	-	**Yes**
3.20 All maintenance of plant and equipment takes place in workshop?	No maintenance work currently done at the contractor's camp. All done within town.	-	**Yes**
3.21 All construction machinery and plant are well maintained (no leaking)?	No plant at contractor's site at this stage.	-	**Yes**
3.22 Workshop has a bunded, impermeable floor sloping towards oil trap?	No workshop currently at the contractor's camp. All works done within town at applicable service provider.	-	**Yes**
3.23 Contractor's Camp / Site Office tidy?	Tidy and clean.	-	**Yes**
3.24 All plant and machinery have drip trays, which are checked and emptied daily?	Stationary vehicles equipped with drip trays.	-	**Yes**

	Observation	Remedial Action	Compliance
3.25 All repairs on machinery using fuels or lubricants done over a drip tray?	No maintenance work currently done at the contractor's camp. All done within town.	-	**Yes**
3.26 Static plant /fixed equipment located within a bunded area?	None existing currently at the contractor's camp / Site Office.	-	**Yes**
3.27 Measures in place to minimise dust generation?	Dust suppression is done by wetting of the contractor's camp / site office and roads.	-	**Yes**
3.28 No handling/transport of erodible materials under high wind conditions?	No winds at site during the time of monitoring visit, nor any transport of erodible materials.	-	Yes

EMP Transgressions	**Contractor:**	**Date:**	**Fine issued:**
None			

Complaints	**Date received:**	**Action taken:**
None		

Other issues	
None	

Appendix A Locality Map

ROSH PINAH SOLAR PLANT

N

Legend

- Towns
- ROSH PINAH SOLAR PARK
- Namuskluft No 88
- Rosh Pinah Townlands
- Rosh Pinah Extensions
- Water Pipelines
- Powerlines
- Main Roads
- District Roads
- Mining Area
- Farms
- National park boundaries

Rosh Pinah

M0118

Tilling Dams

Local Locality

NOTES:

PREPARED BY:

P O BOX 11929
Klein Windhoek
WINDHOEK
CELL: 0811295759
TEL: 061-300820
FAX:061-401294

SURVEY:	DATE: June 2021
DESIGN: Urban Green	
DRAWN: GBS	DATE: June 2021
DRAWING NO: RP Local Locality	

SCALE 1:20,000

Appendix B On-site Photo Report

APPENDIX B – ON-SITE PHOTO REPORT

Photo 1 – View of access to Farm, Site Office & Construction Area with Project Information Board. Access is controlled and register is maintained.

Photo 2 – View of sign indicating access of the Main Road to the Site. Sign is visible and in good condition.

Photo 3 – View of sign indicating speed limits along internal road. Sign is visible and well maintained. Other similar speed limit signs are displayed on-site along the internal roads.

Photo 4 – View of sign at the entrance to the Site Office indicating the dedicated laydown area with required safety requirements to access the site. Sign is visible and well maintained.

Photo 5 – View of dedicated reversed parking area for visitors, located outside of the Site Office. Parking is well maintained. See Appendix E.

Photo 6 – View of HSE Statistics Board & Emergency Contact Numbers displayed at entrance to Site Office. Sign is visible and well maintained.

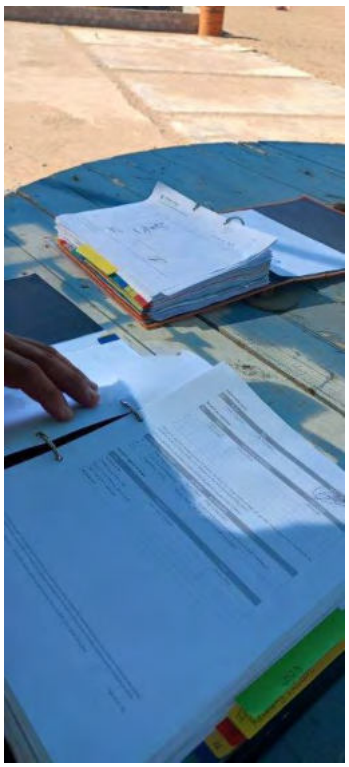


Photo 7 – View of ECC, ESR & Monitoring Reports kept on-site at the Site Office. All required documents are kept on-site and available from the Site Manager at the Contractor's Site Office.

Photo 8 – View of information board at Site Office. Information of importance are presented for notice by the workers on a daily basis. Sign is visible and well maintained.

Photo 9 – View of site offices kept neat and tidy. Entire site is well maintained and kept in perfect condition.

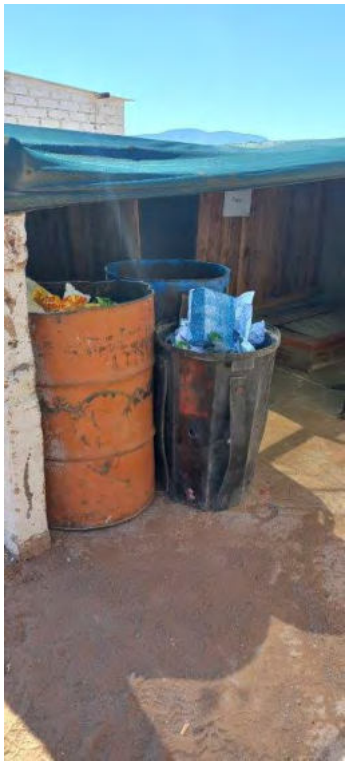
Photo 10 – View of used and recyclable material stored at the Contractor's Office. Entire site is kept neat and tidy, well organised, and functional.

Photo 11 – View of Contractor's site. Neat, organised and well maintained.

Photo 12 –View of site office's kitchen and ablution buildings at Contractor's Site Office. All kept in neat and tidy condition. Building provides for separate ablutions for men and woman, kitchen and locker rooms.

Photo 13 – View of excavator parked within wash bay area and with drip tray. No spillage of oil/diesel was found on either the Contractor's Site office or the construction site.

Photo 14 – View of septic tank. Septic tank is regularly emptied at Rosh Pina WWTP, well maintained with no evidence of any overflow or soil pollution.



Photos 15 & 16 – View of polluted soil and construction waste stored within containers on-site for removal to Rosh Pinah dump site. Waste storage area is well maintained, clean and tidy.

Photo 17 – View of sign indicating dedicated emergency assembly point. Well maintained and visible.

Photos 18 & 19– View of natural vegetation protected on-site at the Contractor's site office.

Photo 20 –View of no-go sign displayed along the road in between the Contractor's Offices- and the construction site. No signs of any off-road driving on-site.

Photo 21 – View of access road in between the Contractor's Offices- and the construction site. Road is well maintained and earmarked.

Photo 22 – View of information board at entrance to the construction site. All requirements in accordance with health and safety is covered by the sign.

Photo 23 – View of E-house and OHTL on the construction site.

Photo 24 – View of installed solar panels with internal access road.

Photo 25 – View of rehabilitated area suitable for natural revegetation.

Photo 26 – View of open space at bottom of boundary fence to provide for natural storm water flow and small mammal, reptile, etc. movement.

Photo 27 – View of containerised transformer.

Photo 28 – View of on-site toilet, secured to the ground. On-site toilets are clean and well maintained.

Photo 29 – View of OHTL extending from the PV plant to the main sub-station within Rosh Pinah. The OHTL will be monitored over the following moths to determine any bird mortalities and applicable mitigations to be applied.

Photo 30 – View of nursery where rescued plants are temporarily kept for replanting after construction has been completed. Replanting of these plants will commence during May during the upcoming rainy season.

Photo 31 – View of rescued plants kept at the nursery. The nursery will remain until such time as all phases has been completed.

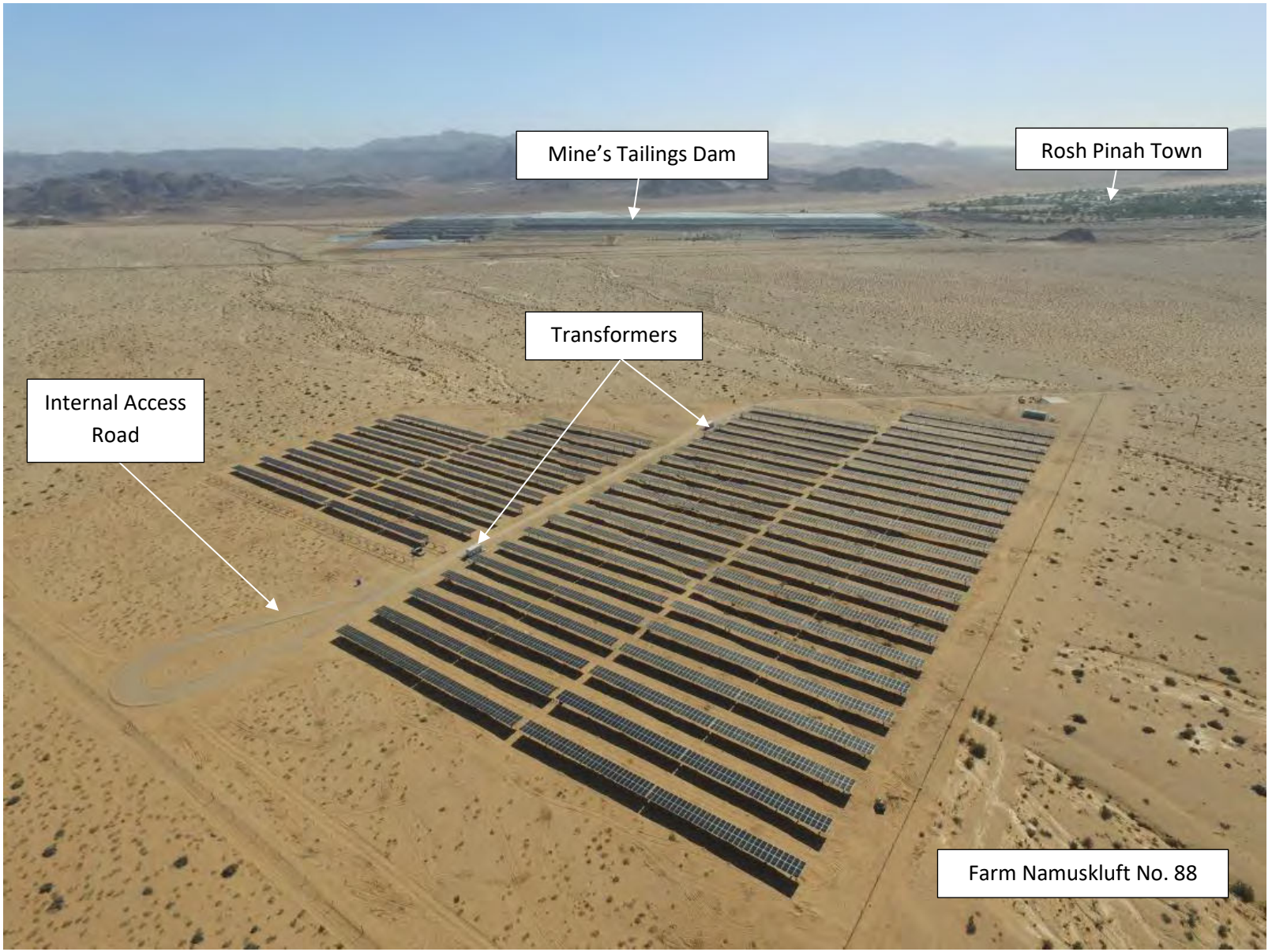


Photo 32 – Aerial view of solar park (Phase I). (Provided by EMESCO)

Appendix C Method Statements

Method Statement:	**RPSP Site Road**				
Date:	27/03/2022	Doc No:	RPSP-QM-ISO-SWMS-001 (Roads)	Rev No:	One (1)

1. HEALTH & SAFETY

PPE REQUIRED	
Reflective Vest	*Yes*
Ear Plugs	*Yes*
Safety Glasses	*Yes*
Heavy Duty Gloves	*N/A*
Gloves	*N/A*
Safety Boots	*Yes*
Hard Hat	*Yes*
Dust Masks	*Yes*
Protective Overall	*Yes*
Other	

2. ENVIRONMENTAL

ENVIRONMENTAL FACTORS	
2.1. Potential Hazards	Temperature, Gravel road surface, Excessive noise, Dust, fatigued, Exessive speed, Hand Signal, and communication, slip, trapping, and falling, earthmoving machinery
2.2. Associated Risks	*Hydration, Expose to the sun, being Hit or run over by the machinery, flying stone/rocks, ear damage, lung and eye irritation, vehicle loss control, miss-communication, injuries*
2.3. Hazardous Operations	*Earthmoving Plants, equipments and tools*
2.4. Environment	*Damage to Flora and Fauna, Oil Wastage, Dust, Ground level variation, weather*
2.5. HSE	*Required PPE, Site Task Risks assessments and toolbox talks completed and signed off.*

3. TOOLS

TOOLS, MACHINERY & EQUIPMENT REQUIRED	
Grader 160K, TLB, Roller, Water truck,	
1x Bell L2606E FEL,	
1 x 10m3 Power star 4 x 4 tipper truck	

4. METHODOLOGY

PROPOSED METHODOLOGY
1. Refers to DWGs **(303-01140-01-RD-001, 303-01140-01-RD-002 and RPSP-01-civ-004 rev2-Fence & Road)**

2.	Ensure instrument calibration.
3.	Ensure machines inspections
4.	Ensure the daily Progress adheres to program and requirements
5.	Surveying of the roads, bush clearing of the road width, dust control of the road,
6.	Grading the Road to the formation level
7.	Importing the G6 materials, Spreading, mixing with the insitu materials (150mm layer)
8.	Wet the road, compact with a mechanical roller.

5. PROCESS & MATERIALS USED

PROCESS:		MATERIALS/EQUIPMENT:
1.	Surveying, setting of the road width, Length	Survey Equipments
2.	Bush Clearing of the Roads width	(Refers to Section 3 above)
3.	Set out for Road width for confirmation	Survey Equipments
4.	Dust Control/ water the Road	(Refers to Section 3 above)
5.	Grading 300mm to the formation level, below NGL	(Refers to Section 3 above)
6.	Hauling of +_1500m3 G6 Gravel from Trevali borrow pit up to the new access road upgrade.	(Refers to Section 3 above)
7.	Spreading the 300mm G6 Gravel road base	G6 materials
8.	Mix, wet and compact the road layers	(Refers to Section 3 above)
9.	Surveying, Confirming the road Setting out	(Refers to Section 3 above)

6. INSPECTIONS

TASK CHECKLIST		✓
1.	Is the Risk Assessment available on site?	
2.	Is it site/Task-specific?	
3.	Is it completed correctly for the worksite?	
4.	Has it been signed off & dated each day?	
5.	Check and ensure the Road Length (Surveying)	
6.	Check and ensure the Road width (5.2m)	
7.	Check and ensure the Road Carridgeway width (4m)	
8.	Check and ensure Road Shoulder widths (0.6m)	
9.	Check and ensure the Start and end of the traffic circle	
10.	Check and ensure the traffic circle radius (R15.0m)	
11.	Surveying, setting of the road width, Length	
12.	Is Bush Clearing of the Roads width done accordingly?	
13.	Check on the Material (G6) Quality	
14.	Is the Grading of the formation level, 300mm below GL?	
15.	Whether the Spreading, mixing and wetting is Adequate?	
16.	Whether the Compaction is adequate?	

17. Whether the shoulder is compacted Simultaneously along with the base?	
18. Is the Road drainage system properly planned?	
19. Is the Road drainage system Properly constructed?	

Company Representative:	**Quality Controller:**	**Quality Control Manager:**
Name:	Name:	Name: Tauno F Matheus (Acting)
Signature:	Signature:	Signature: 
Date:	Date:	Date: 27/03/2022

Method Statement:	**Perimeter Fence**				
Date:	17/03/2022	Doc No:	RPSP-QM-ISO-SWMS-001 (Perimeter Fence)	Rev No:	ONE (1)

1. HEALTH & SAFETY

PPE REQUIRED	
Reflective Vest	*Yes*
Ear Plugs	*Yes (working with concrete mixer)*
Safety Glasses	*Yes*
Heavy Duty Gloves	*Yes*
Gloves	*When Required*
Safety Boots	*Yes*
Hard Hat	*Yes*
Dust Masks	*Yes*
Protective Coverall	*Yes (long sleeves)*
Other	*Safety harness (when installing the Y-Standards)*

2. ENVIRONMENTAL

ENVIRONMENTAL FACTORS	
Potential Hazards	*Manual Handling, lifting, Loss materials, Excessive noise, Sharp Edge, slip, trip, fall, Dust.*
Associated Risks	*Muscle pain, Back&Hand injuries, material falling, excessive noise can reduce the hearing ability, Lungs&Eye Irritation*
Hazardous Operations	*Hand Excavation, working with macheries, equipment and electric tools*
Environment	*Concrete Wastes/Spillages, dust, excessive weather condition*
SHE	*Ensure RA is in place and signed off, No unauthorized person on-site, proper lifting Techniques, PPEs, Toolbox talk, supervision, competences,*

3. TOOLS

TOOLS, MACHINERY & EQUIPMENT REQUIRED	
TLB, Shovels, Spades, Pliers, Concrete mixer, Scaffolds,	
Small Electric tools.	

4. METHODOLOGY

PROPOSED METHODOLOGY
1. This method statement will apply to the installation of the 2.4 high Diamond mesh security fence as per drawing **RPSP-01-CIV-011 and RPSP-01-CIV-004** supplied by Emesco.
2. Check that the RA&Toolbox talk are all in place and that they are approved and signed off.

3. Ensure the the daily progress adheres to program and requirements
4. Machineries, Instrument and tools are checked for defects and fit to be used
5. Supply and erect new fencing materials for new fences
6. Ensure that the team is trained competent to perform the tasks
7. Proper supervision

5. PROCESS & MATERIALS USED

PROCESS:	MATERIALS:/EQUIPMENTS
1. Setting and staking of the fence boundaries of the Site	Surveying instruments
2. Bush clearing of 4m wide strip for fencing	Earthmoving plants/Equipments.
3. Hand Excavation for 3.6m Standards & Posts. Thus: 1.2m deep	1. (ii) 3.0m x 2,5 kg/m mild steel y-section (with anti-corrosion coating but not galvanised) every 5m 2. 3.6m x 75/100mm dia treated timber posts every 20m alternating 3. 3.6m x 100/125mm dia treated timber posts every 20m alternating 4. Straining posts, stays, and anchors: 4.1. Vertical 3.6m x 125/150mm dia treated timber 4.2. Inclined Steel stays and anchors, 60mm outside dia galvanized tubular posts and 2.95 mm thick walls 2.5 m long 4.3. Horizontal 1.8m x 75/100mm dia treated timber
4. Backfill and compaction using Excavated material for 3.6m, 75/100mm dia Standards	Backfills
5. E/O for Cement Treated Backfill and compaction for 100/125mm dia posts	Cement
6. 10MPa Concrete Footings for 125/150mm dia Posts	Cement, Riversand, 19mm C/Stones
7. Braces and tension wires will be installed between the fence posts.	Smooth wires
8. Installation of diamond Mesh (2.4m high)	1. 1650m Barded Wire netting 2.5mm thickness x 50mm 2. 4,0mm dia, mild steel straining wire, Class B 3. 2,24mm dia, high tensile fencing wire, Class A 4. 2,5mm dia, mild-steel binding wire, Class B 5. 2,0mm dia, mild-steel binding wire, Class B
9. Drainage Structures under Fence	Y20 Reinforcement
10. Installation of Barded Wires	1.9x2.8mm Campeon Barded wire (class A Galvanised).
11. Fixing the two (2) single leafs gates	Gates

6. INSPECTIONS

TASK CHECKLIST		✓/X
1.	Grading/terrain adjustment	
2.	Removal and disposal of existing fence/curbing (if applicable)	N/A
3.	Other specific steps (e.g. moving sprinklers, concrete work, etc., if applicable)	N/A
4.	Final clearance of fence line to enable crew/equipment access	
5.	Walkthrough	
6.	Any calibration/data sheets/certificates for fencing materials	
7.	Is the fencing constructed from suitable, dedicated materials	
8.	Is access under or through the fence barricaded – ie no gaps throughout the construction process?	
9.	Is fencing erected on a firm foundation throughout the construction process?	
10.	Is the fencing installed on level ground – ie a lean of less than three(3deg) degrees out of vertical?	
11.	Is the fence erected in a generally straight line within the site boundary?	
12.	Is fencing stable and able to withstand any anticipated loads to which it will be subjected – including wind loads, persons attempting to scale it, forces caused by people in heavy pedestrian areas, or impact forces from vehicles or plant?	
13.	Do fencing gates provide the same level of security as the rest of the fence? (locks and chains should be fitted for added site security and safety)	
14.	Do fencing gates provide the same level of security as the rest of the fence? (locks and chains should be fitted for added site security and safety)	
15.	Are gates overlapped so they can be locked easily, and are they reasonably level for opening safely?	
16.	Does signage on the fence include relevant information – including 24-hour emergency contact name and telephone numbers?	

Company Representative:	Quality Controller/Check:	Quality Control Manager:
Name:	Name:	Name: Matheus F Tauno (Acting)
Signature:	Signature:	Signature:
Date:	Date:	Date: 26/03/2022

Method Statement:	LV-MV-DC-Earthing, Scada TRENCHES				
Date:	05/04/2022	Doc No:	RPSP-QM-ISO-SWMS-	Rev No:	01

1. HEALTH & SAFETY

PPE REQUIRED	
Reflective Vest	*Required*
Ear Plugs	*When Required*
Safety Glasses	*Required*
Heavy Duty Gloves	*Required*
Gloves	*When Required*
Safety Boots	*Required*
Hard Hat	*Required*
Dust Masks	*Required*
Protective Coverall	*Required*
Other	*N/A*

2. ENVIRONMENTAL

ENVIRONMENTAL FACTORS	
Potential Hazards	*Hazardous Slipping, tripping, falling pinch points*
Associated Risks	*Tripping, Falling, cuts, bruises&other minor injuries*
Hazardous Operations	*Working with Machinery, equipment, tools, etc.*
Environment	*Dust, Uneven ground, Flora and Fauna, Excessive weather conditions*

3. TOOLS

TOOLS, MACHINERY & EQUIPMENT REQUIRED	
TLB, Shovels, Spades, Picks, Rakes, Hammer	
Surveying Instruments	

4. METHODOLOGY

PROPOSED METHODOLOGY
1. Refers to DWGs **((rpsp-01-ele-001 rev1-Trench), (rpsp-01-ele-002 rev2-Trench Detail), (rpsp-01-ele-003 rev0-MV Trench), (rpsp-01-ele-004 rev0-LV Trench), (rpsp-01-ele-005 rev1-DC Trench), (rpsp-01-ele-006 rev1 - EARTH Trench), (rpsp-01-ele-007 rev0-SCADA Trench), (rpsp-01-ele-008 rev0-Sleeve)).**
2. Make sure all RA and Toolbox Talk are completed, approved and signed off.
3. Check and make sure that everyone on the task wears PPEs.
4. Ensure machines inspections.
5. Ensure instrument calibration.

6. Ensure the daily Progress adheres to program and requirements.
7. Ensure Surveying of the Trenches and bush clearing is done accordingly

5. PROCESS & MATERIALS USED

PROCESS:	MATERIALS:
1. Setting out the trenches positions	Surveying instruments
2. Excavation of the cable trenches minimum and maximum width(350-1200mm). Refer DWGs **(rpsp-01-ele-002 rev2-Trench Detail)**	TLB
3. Excavation of the cable trenches minimum and maximum depth(600-900mm). Refer DWGs **(rpsp-01-ele-002 rev2-Trench Detail)**	TLB
4. Wetting and Hand trimming of the Excavated trenches	Water, Spade, Shovel, Measuring tape, builders line
5. Measure and confirm the width and length of each specific trenches. Refer DWGs **(rpsp-01-ele-002 rev2-Trench Detail)**	Measuring tape, builders line
6. Spreading the bedding layer to a required depth, Refer DWGs **(rpsp-01-ele-002 rev2-Trench Detail)**	TLB, Water, Spade, Shovel, Measuring tape, builders line
7. Install cables	TLB, Spade, Shovel, Measuring tape, builders line
8. Backfill and compact	TLB, Spade, Shovel,
9. Housekeepinging	Spade, Shovel, Rakes

6. INSPECTIONS

TASK CHECKLIST	✓
1. Check if surveying and setting out are done correctly?	
2. Check and ensure if Excavation is done correctly (position, depth, and width correct)?	
3. Is the trench's bottom as levelled as required, change in gradient or level made as gradually as possible?	
4. Is the trench's bottom free of stones and edge cleared of stones, tools or objects that may fall into the trenches and damage the cables?	
5. Is shoring done where required?	
6. Is dust controlled during the excavation?	
7. Are all the bends 90deg and trimmed accordingly (Bending radius).	
8. Are tests performed accordingly as required?	
9. Is the cable installed correctly?	
10. Are backfill, compaction and housekeeping done correctly?	

Company Representative:	Quality Controller:	Quality Control Manager:
Name:	Name:	Name: Tauno F Matheus (Acting)
Signature:	Signature:	Signature: 
Date:	Date:	Date: 09/04/2022

Appendix D Search and Rescue Report by Lithops Research & Conservation Foundation

IMPACT ASSESSMENT STUDY FOR PROPOSED ROSH PINAH SOLAR PARK

PREPARED BY:

Dr Roy Earlé (UK) and Mrs. H Mouton (NAM)

Lithops Research & Conservation Foundation

BACK GROUND

The proposed Rosh Pinah Solar PV Project area is to the southeast of Rosh Pinah, some 2.5km from the middle of the town. The Solar Park is to be developed in a basin area flanked by isolated mountainous areas on three sides. The vegetation can be described as Southern Euphorbia Shrubland with the vegetation at the site dominated by low woody shrubs interspersed with grass tufts, *Euphorbia dregeana* bushes and low growing succulent and drought resistant plants. Along the numerous dry watercourses slightly taller trees can be seen.

AIM

The aim of the study was to determine the state and composition of the vegetation at the proposed site and whether the construction and presence of the Solar Park would have a severely detrimental effect on the natural environment. As a first phase only the area to be developed initially i.e. the access and service road and the first 15ha to be covered by solar panels will be considered.

SITE INSPECTION

The site was inspected on two different occasions (24th September 2021 and 3rd October 2021). During both of the inspections the occurrence of any plant and animal species were noted. The second visit concentrated on the area where the access and service roads were to be constructed as the ecologically important plants in the way of the proposed road should ideally be removed for relocation so as to preserve the natural flora of the area.

FINDINGS

1 General environmental considerations

The site inspections occurred during a dry part of the year and during a period when drought conditions with well below average rainfall was recorded in the area for several of the preceding years. The effect of the drought was very noticeable among the low growing succulent plants such as the Mesembryanthemaceae as no live plants but numerous plant carcasses could be found in the area. These plants generally have shallow root systems and prolong droughts will often wipe out populations of older plants. However, the large number of other succulents and drought resistant plants such as *Euphorbia dregeana* and *Monsonia patersonii* that have also died off, probably indicate that other factors than drought alone, have also played a role in the dying off of these plants. Most of bush -like 'vygie-type' Mesembryanthemaceae need intense light to grow adequately. It seems as if the plant carcasses of *Juttadinteria albata* have suffered somewhat due to the dust off the nearby mine from where the wind caries the dust to swirl over the site deposited the dust there frequently.

Euphorbia dregeana

Brownanthus arenosus

2 Botanical findings

The following plants have been identified at the site being directly in the path of the proposed access road (three meters wide) through the center of the park and would need to be removed for relocation. As soon as the exact path and width of the proposed road have been staked out, the plants to be removed can be individually marked. It is envisaged that the following will have to be removed for relocation.

**Brownanthus arenosus* (11+ plants)
**Euphorbia dregeana* (3+ plants)
**Monsonia patersonii* & *Monsonia flavescens* (60+ plants)

Monsonia patersonii

Monsonia flavescens

Other plants species of interest identified at the site and that may need removal and relocation at a later stage if the panel installation would be at positions where these plants could be affected, are:
Dyerophytum africanum
Euphorbia mauritanica
Euphorbia melanohydrata
Euclea pseudobenus
Hermbstaedtia glauca
Hoodia gordonii
Monechma millisimum
Salsola sp.
Sisyndite spartea

The following plant species were also identified at the site but since they are either annuals or self-seeding plants, they are of least concern and no special measures are needed to protect or transplant them:
Juttadinteria albata (all plants of this species have died at the site)
Mesembryanthemum barklyi
Mesembryanthemum guerickianum
Rogeria longiflora

Euphorbia mauritanica

Euphorbia melanohydrata

Euclea pseudobenus

***Mesembryanthemum* sp.**

3 Animals

The following animals or signs of them were observed in the area:
Black-backed Jackal *Canis mesomelas*
Karoo Chat *Cercomela schlegelii*
Barlow's Lark *Calendulauda* barlowi
Dwarf Beaked Snake *Dipsina multimaculata*
Common Barking Gecko *Ptenopus garrulus*
Western Sandveld Lizard *Nucras tessellata*

Dwarf Beaked Snake *Dipsina multimaculata*

RECOMMENDATIONS

It is recommended that the four plant species mentioned above which are directly in the path of the proposed road to be removed with their tap roots intact. These plants should be transferred to polyethylene plant bags (preferably biodegradable) and the bag filled with the soil from the area where the plants were removed i.e. the area of the proposed road as to minimize the disturbance of any other plants in the area. In this way the plants can be individually transported to the holding site.

The holding site can be a simple flat area shaded by 20-30% shading netting, preferably white. Only the top of the holding facility needs to be covered. At the holding facility the individual plants can once again be planted in the soil and at the level of the soil, in the polyethylene bag. Having the plants for relocation somewhat contained in a polyethylene bag greatly reduces the disturbance of the roots and survival of the plants translocated in this way is thus greatly enhanced. If the bags are not sunk into the soil, the polyethylene will increase the soil temperature in the bags to such an extent that the roots of most plants will be scorched and survival rates are low. Aftercare of the plants removed from habitat will include watering the plants weekly for at least the first two months in the holding facility. It is recommended that a sample of the plants should also be kept at a second facility away from the project in case of disaster and as a project promotion exercise away from the solar plant.

The majority of the plants to be removed to the holding facility is *Monsonia patersonii*. The largest of these plants have a 40cm crown and would need a 20-30cm wide and 30-50cm deep polyethylene planting bag. The 60 odd *Monsonia patersonii* plants to be relocated will occupy an area of about $30m^2$ with the smaller number of *Brownanthus arenosus* and a few of the large *Euphorbia dregeana* occupying another $10m^2$. A covered holding area of about $50m^2$ would be adequate for this part of the project but an area of at least twice the size ($100m^2$) would

probably be needed to house the plants destined for translocation for the initial 15ha area to be developed where the sun panels is to be installed.

When the construction of the Solar Plant has been completed it is recommended that a reverse process be implemented. The plants should be removed from the holding area in new polyethylene plant bags and re-planted in selected areas throughout the Solar Plant by simply cutting the bottom of the polyethylene bag open to allow the roots to penetrate the soil freely. A process will have to be put in place so to ensure that plants are watered on a weekly basis for at least 2 months after replanting.

CONCLUSION

Apart from the minimum of plant relocation as suggested above, the development of the sun panel farm at Rosh Pinah would have little effect on the natural environment of the site. The total demise of the *Juttadinteria albata* population at the site is concerning for the reasons as stated above, however there is hopefully an adequate seedbank in the soil that would over time restore this population.

The layout of the panels with the single central access road suggest that environmental conservation rules such as low speed limits and no off-road driving will be adhered to. This will ensure that plants are not damaged and animals are not disturbed. The animals observed in the area will all be able to adapt well to the development and no problems in this regard is anticipated.

FINANCIAL CONSIDERATIONS

The Foundation propose that the Solar project pay a daily fee of N$ 800.00 p/person, transport costs of N$ 2500.00 per return trip from Alte Kalköfen Lodge to Rosh Pinah and when necessary accommodation costs (DBB) for two persons at N$ 1150.00 p/person. These costs will be negotiated and agreed with the Manager of the Solar Project when visits are required.

SEQUENCE OF ACTIONS FOR ROAD BUILDING PHASE

1 Mark the position of the proposed road (Solar project)
2 Mark individual plants for removal (Foundation)
3 Prepare the holding facility and acquire plant bags (Solar project)
4 Removal of the plants (Solar project & Foundation)
5 Training to do aftercare of plants in holding facility (by Foundation for Solar project personnel)

Report prepared by:
The *Lithops* Research & Conservation Foundation
Alte Kalköfen Lodge
Bethanie District
Karas Region
Namibia

ROSH PINAH SOLAR PLANT

Plant Search & Rescue Process Report

2021_11_05 – 2021_11_12

Alan Juan Strydom
Client Representative
Rosh Pinah Solar Plant (Pty) Ltd.

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1. SCOPE

Rosh Pinah Solar Park (PTY) Ltd intends to develop, construct, and operate a photovoltaic solar power plant with a maximum export capacity of 5.5 MW in its first Trenches near the Rosh Pinah RPZC mine and town. Therefore, In accordance with Rosh Pinah Zinc Corporation (PTY) Ltd's policies and the Namibian National Energy Policy to use renewable energy rather than fossil fuels to reduce the impact of Global climate change while ensuring the security of energy supply to the local Rosh Pinah Zinc Mine.

The solar park will be located on a farm called Namutskluft No 88 outside the town of Rosh Pinah, which is well known for its biodiversity and is located in one of the world's 25 identified biodiversity hotspots. An ecological baseline assessment was carried out during the scoping phase, and it was determined that it is a sensitive biodiverse area.

A study was conducted by the Lithops Research & Conservation Foundation to determine the extent of the biodiversity and what impact the building of the solar plant will have on the area's plants and wildlife. The study concluded that eight plant species needed to be removed from the construction area and placed inside a quarantine nursery. Once the solar plant has been built and completed, a reintroduction of the quarantined plants has to be done in the solar park area to keep the biodiversity of the surrounding area in accordance with the EMP requirements.

The following plants were indicated and marked for removal and the quarantine procedure:

- *Euphorbia Mauritanica;*
- *Euphorbia Melanohydrata;*
- *Euclea Pseudobenus;*
- *Mesembryanthemum sp;*
- *Monsonia Patersonni;*
- *Monsonia Flavescens;*
- *Euphorbia Dregeana;*
- *Brownanthus Arenosus.*

The quarantine area is a 10m x 10m = 100m^2 area nursery built for the extracted plant rehabilitation.

The sketch below shows where the nursery was constructed next to the proposed site laydown area to facilitate the plant quarantine process.

2. PROCESS

2.1 DAY 1: 05/11/2021

Emesco Energy (PTY) Ltd was tasked to complete all identified plants' location, removal, and relocation from the construction area to the quarantine area. A local group of six and one Emesco team member were tasked to complete this process over seven days from 05/11/2021 to 12/11/2021. The team was given seven days to locate and relocate the identified plants to the nursery. All Health, Safety gear and tools were supplied to the local team; the team received an on-site induction and instructions on on-site regulations and requirements

The site kick-off started with the inspection of the installed shading net system, which Eden Greenfields Namibia commissioned. The installation was inspected and found to be adequate to the specifications given to Greenfields; no defaults were found on any installed component, and it was constructed to specification and design.

Figure 1 - Eden Greenfield's shading structure.

The local team then started by cleaning the nursery area and setting out the fencing line for the fence that needed to be installed around the nursery to protect the plants from the construction process.

Figure 2 - Nursery area cleaning process.

After clearing the nursery area, the team installed a water line in the nursery, which will assist in sustaining the plants over the rehabilitation period.

Figure 3 - Installation of water line.

The local team then started installing the fence post around the nursery, a mix of cement and local soil was used to cast the posts below NGL.

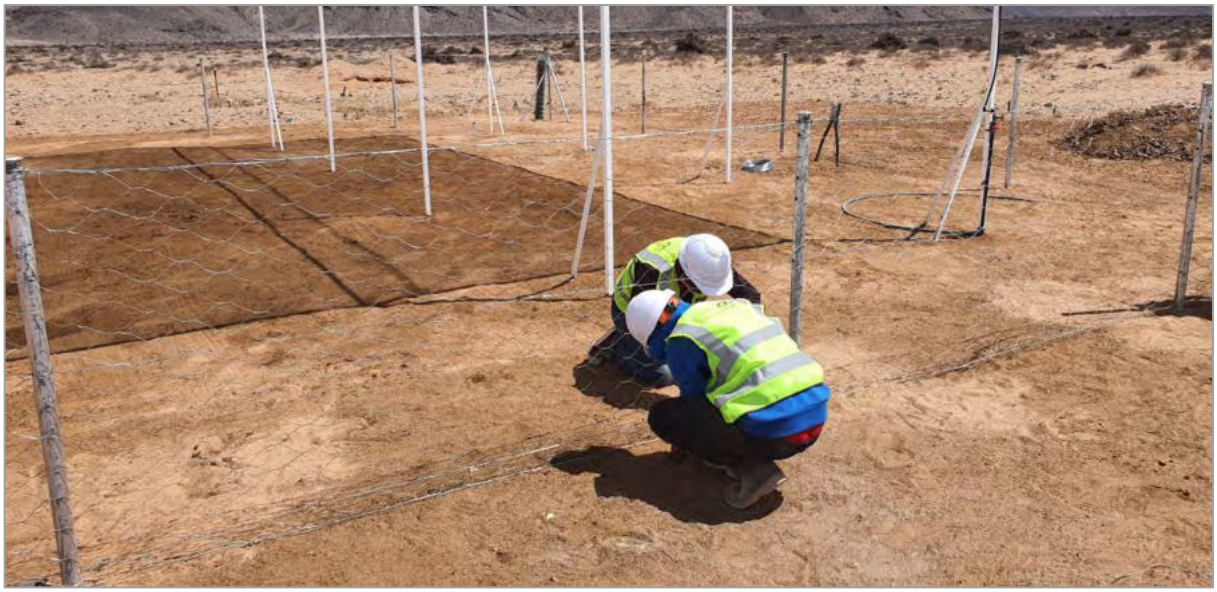
Figure 4 - Installation of the fence.

The fence installation took two days to complete as cement curing time was not considered as the fence has no mechanical forces against it.

2.2 DAY 2: 06/11/2021

The team member continued with installing the fence around the nursery area.

Fence installation completed on the 6th November 2021



2.3 DAY 3: 08/11/2021

On day three, the team started moving into the earmarked construction field to locate and remove the identified plant species and move them to the nursery.

Figure 5 - plant identification and removal.

The preparation of the nursery area by digging trenches to reduce any heat transference from the plastic planting bags to the plant roots.

Figure 6 - Nursury trenching

Plant identification and removal from the construction site area to the nursery are ongoing; the total area of 390 625m^2 was inspected. All identified species were removed from this area and placed in the nursery area.

2.4 DAY 4: 09/11/2021

Identification of plants still in process and removal from site and placement in rehabilitation nursery.

Figure 7 - Monsonia Patersonni identified and removed.

8 - Placing a range of plant species inside the nursery 1.

9 - Placing a range of plant species inside the nursery 2.

Figure 10 - Plant relocation progress.

Figure 11 - Daily progress.

2.5 DAY 5 – 7 10/11/2021 – 12/11/2021

All the plants removed from the site were the plants identified by the Lithops foundation by means of removing the plants from the soil, keeping as much soil on the routes as possible. This helps the removed plants to rehabilitate process and has a higher chance of survival over this period.

Transfer the plant to the plastic plant bag and add some water to place under the shade netting structure.

This process was performed over 348 times during the entire procedure; these plants are described in the figures below;

Figure 12 - Brownanthus Arenosus.

Figure 13 - Euphorbia Dregana.

Figure 14 - Euphorbia Mauritanica

Figure 15 - Euphorbia Melanohydrata.

16 - Monsanii Flavescens.

17 - Mosonia Patersonii.

18 - Euclea Pseudobenus.

19- Mesembryanthemum sp.

After all identified endangered plants were removed and moved to the rehabilitation area, Emesco Energy (PTY) Ltd removed and relocated over 348 plants from the earmarked construction area.

The team closed the project on Friday, 12th November 2021; the site was cleared of all plastics and biohazards from the site are earmarked for the construction of the solar plant.

20 - Trenches 1 Rescue and rehabilitation process.

21 - RPSP Banner.

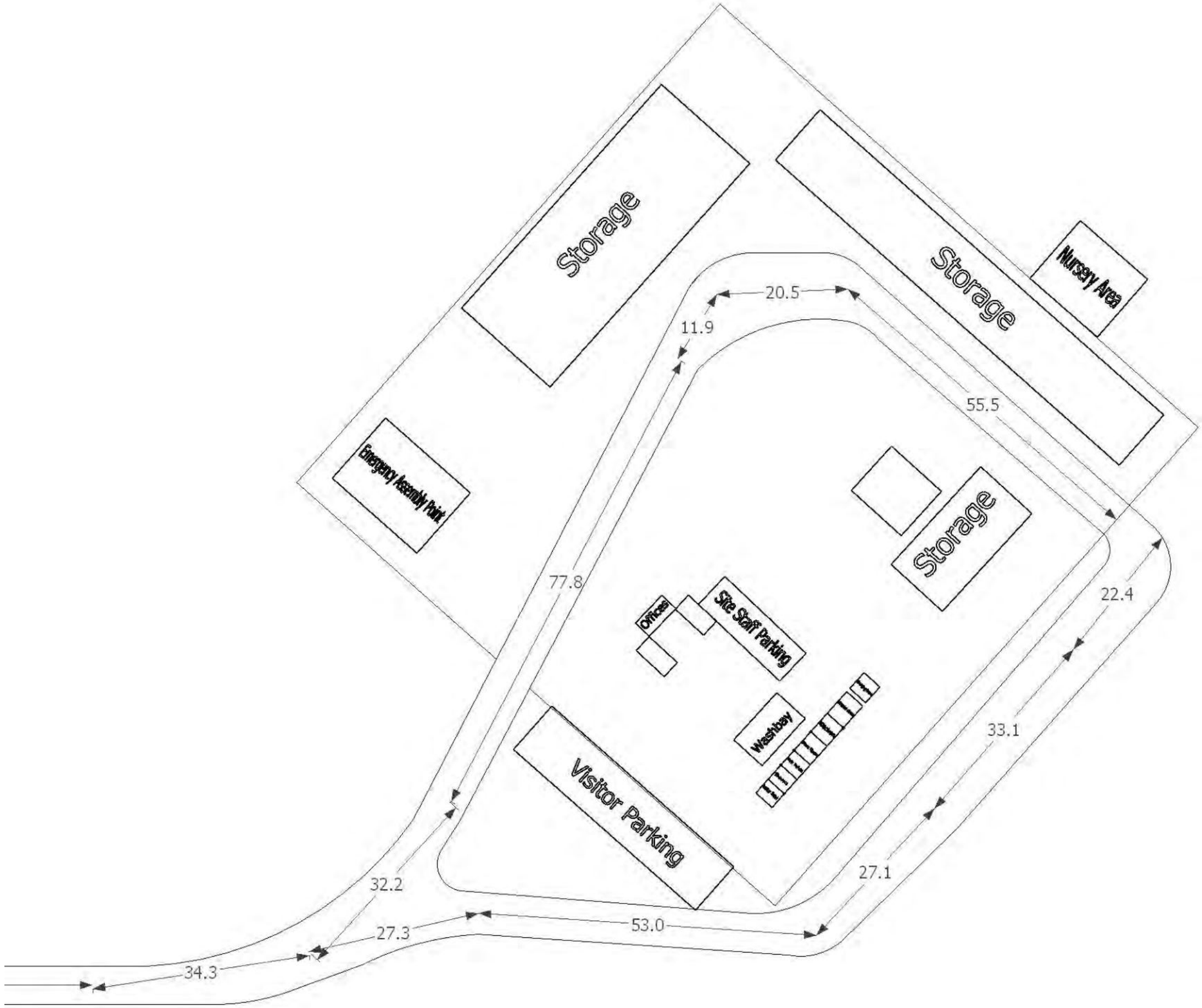
3. PROJECT COMPLETION

No species of animals were encountered during the plant rehabilitation process; all Health, Safety & The Lithops Research & Conservation Foundation had a site visit after all activities of the relocation and rehabilitation processes were completed. Dr Roy Earle' and Mrs H Mounton from the Lithops foundation visited the site and were content as all requirements were met and received approval as a compliant with the EMP and Impact assessment study done for Rosh Pinah Solar Park.

Process closure Environmental responsibilities were adhered to over this period.

Completion and closing date on 13th November 2021.

Appendix E Contractor's Camp Layout


Storage
Storage
Nursery Area
20.5
11.9
55.5
Emergency Assembly Point
Storage
77.8
Office
Site Staff Parking
22.4
Washbay
33.1
Visitor Parking
27.1
32.2
27.3
53.0
34.3

Appendix F Toolbox Talks

TOOLBOX TALKS TOPICS

Date	topic covered
_	
21/04/2022	Skin cancer
25/04/2022	Tripping hazards
10/04/2022	Accountability
16/05/2022	covid 19
23/05/2022	Environmental-Fauna and flora
31/05/2022	Snakes-Hibernation
04/06/2022	Cellphone usage while driving
14/06/2022	Dehydation
24/06/2022	Visibility
29/06/2022	Chrusher dust
05/07/2022	Shortcuts
15/07/2022	Lifting techniques
18/07/2022	Fatigue management
28/07/2022	Stress
01/08/2022	Noise-NIHL
11/08/2022	Suspended loads
15/08/2022	Environmental-protected plants
24/08/2022	Toilets on site
29/08/2022	Emergency Evacuation
01/09/2022	Emergency attendance register
05/09/2022	Housekeeping
14/09/2022	Waste management-Commitment
21/09/2022	Cigarette buts disposal
28/09/2022	Snakes onsite
05/10/2022	Attitude on site towards HSE
12/10/2022	Hygiene in the workplace
19/10/2022	Eye Protection and protection of your eyes
26/10/2022	Slips Trips and fall prevention
02/11/2022	Flora & Fauna
09/11/2022	Safe Working Procedures
16/11/2022	Alcohol & Drug Abuse
23/11/2022	Barricading for Trenches
30/11/2022	Handling of Panels Safely
07/12/2022	Electrical works and safety
14/12/2022	Site rehabilitation and cleaning processes
21/12/2022	Wildlife, Fauna & Flora care and reporting
09/01/2023	DSTI completions
16/01/2023	Inspection Reports
23/01/2023	Risk Assessments & Hazard Identification
30/01/2023	Intoxication & Using Drugs On Duty

TOOLBOX TALKS TOPICS

06/02/2023	Fatigue Management
13/02/2023	Motorised Equipment
20/02/2023	Risk Assessments & Hazard Identification
27/02/2023	Manual Handling of Loads